Amendments to the Claims

This listing of claims will replace all prior versions and listings of claims in the application:

Listing of Claims:

1. (Cancelled).

2. (Cancelled).

3. (Currently Amended) The system of Claim 1~~7~~, wherein:

the high-throughput (HT) device has a much higher throughput capability than the receiving station (STA).

4. (Cancelled).

5. (Currently Amended) The system of Claim 1~~7~~, wherein:

the high-throughput (HT) device includes a designation in a SIGNAL1 field of a physical layer convergence protocol (PLCP) frame constituting the same frame that is being sent from the high-throughput (HT) device to the receiving station (STA).

6. (Previously Presented) The system of Claim 5, wherein:

legacy receivers, having a slower throughput capability than a throughput capability of the transmitter, recognize the SIGNAL1 field but do not recognize a SIGNAL2 field.

7. (Currently Amended) ~~The system of Claim 1, wherein the virtual clear channel assessment (VCCA) time period~~A system comprising:

a high-throughput (HT) device configured to invoke a virtual clear channel assessment (VCCA) mechanism and set a virtual clear channel assessment (VCCA) time period ~~equals~~equaling a sum of:

a content of a Duration field in frame header of the frame being transmitted;

eight times a quotient of an actual length, in octets, of the frame being transmitted, and a transmission rate, in Mbps, of the frame being transmitted;

an extended inter frame space; and

a distributed inter frame space;

a receiving station (STA) configured to receive an indicate that the communication medium is busy for a time period equal to the virtual clear channel assessment (VCCA) time period longer than an actual frame transmission period being sent from the transmitter to the receiver; and

wherein the receiving station (STA) is further configured to refrain from transmitting on the communication medium during the time period.

8. (Currently Amended) The system of Claim 47, wherein:

the first a physical layer (PHY) device configuration includes a length of a network allocation vector (NAV) configured to inherently perform a virtual carrier sense (VCS) function, thus avoiding a requirement of transmitting a separate additional frame to perform the VCS function.

9. (Currently Amended) The system of Claim 47, wherein:

the high-throughput (HT) device configuration includes a length of a network allocation vector (NAV) plus a time needed to transmit the given frame's payload, to inherently perform a virtual carrier sense (VCS) function in a clear channel assessment (CCA) stage, thus avoiding a requirement of transmitting a separate additional frame to perform the VCS function

10. (Currently Amended) A method for avoiding contention on a communication medium by devices including at least a transmitter and a receiver, the method comprising:

setting a time period equal to a virtual clear channel assessment (VCCA) time period equaling a sum of:

a content of a Duration field in frame header of the frame being transmitted;

eight times a quotient of an actual length, in octets, of the frame being transmitted, and a transmission rate, in Mbps, of the frame being transmitted;

an extended inter frame space; and

a distributed inter frame space;

instructing a receiver to indicate that the communication medium is busy for the time period longer than a frame being sent from the transmitter to the receiver; and

prohibiting the receiver from transmitting on the communication medium during the time period.

11. (Original) The method of Claim 10, wherein the instructing step includes:

using a field within a physical layer (PHY) protocol data unit (PDU) to specify a duration of the time period.

12. (Original) The method of Claim 10, wherein the instructing step includes:

using a designation in a SIGNAL1 field of a physical layer convergence protocol (PLCP) frame constituting the same frame that is being sent from the transmitter to the receiver.

13. (Original) The method of Claim 12, further comprising:

in legacy receivers having slower throughput capability than a throughput capability of the sender, recognizing the SIGNAL1 field without recognizing a SIGNAL2 field.

14. (Original) The method of Claim 10, wherein the instructing step includes:

including, in a given frame, a length of a network allocation vector (NAV) configured to inherently perform a virtual carrier sense (VCS) function, thus avoiding a requirement of transmitting a separate additional frame to perform the VCS function.

15. (Original) The method of Claim 10, wherein the instructing step includes:

including, in a given frame, a length of a network allocation vector (NAV) plus a time needed to transmit the given frame's payload, to inherently perform a virtual carrier sense (VCS) function in a clear channel assessment (CCA) stage, thus avoiding a requirement of transmitting a separate additional frame to perform the VCS function

16. (Currently Amended) A network including a communication medium on which contention is to be avoided, the network comprising:

a transmitting element, configured to transmit on the communication medium, a frame that includes an instruction that the communication medium is busy for a time period equal to a virtual clear channel assessment (VCCA) time period longer than an actual transmission time of the frame that includes the instruction equaling a sum of:

a content of a Duration field in frame header of the frame being transmitted;

eight times a quotient of an actual length, in octets, of the frame being transmitted, and a transmission rate, in Mbps, of the frame being transmitted;

an extended inter frame space; and

a distributed inter frame space; and

a receiving element, configured to receive the frame that includes the instruction, and, in response to the instruction, to refrain from transmitting on the communication medium during the time period, so as to avoid the contention on the communication medium.

17. (Original) The network of Claim 16, wherein:

the transmitting element has a much higher throughput capability than the receiving element.

18. (Original) The network of Claim 16, wherein:

the communication medium is a wireless communication medium.

19. (Original) The network of Claim 16, wherein:

the instruction is a designation in a SIGNAL1 field of a physical layer convergence protocol (PLCP) frame constituting the same frame that is transmitted from the transmitting element to the receiving element, the SIGNAL1 field defining parameters associated with a particular communications protocol that is one of plural distinct communications protocols operating on the network.

20. (Original) The network of Claim 16, wherein:

the instruction includes a length of a network allocation vector (NAV) configured to inherently perform a virtual carrier sense (VCS) function, thus avoiding a requirement of transmitting a separate additional frame to perform the VCS function.